CLAIMS

1. A method for the determination of prosthetic infections in which at least one *Staphylococcus* strain is involved, which comprises detecting from blood samples or other biological fluid samples antibodies reacting with a polysaccharide produced by a virulent staphylococcal strain.

2. A method according to claim 1, in which the antibodies are IgG and IgM.

3. A method according to ~~claims 1-2~~ Claim 1, in which the virulent staphylococcal strain is a strain of coagulase negative or positive species.

4. A method according to claim 3, in which said species is *Staphylococcus epidermidis* or *Staphylococcus aureus*.

5. A method according to claim 3, in which the virulent staphylococcal strain is DSMZ No. 11942.

6. A method according to ~~claims 1-5~~ Claim 1, in which the polysaccharide is obtained by the following steps:

a) culturing the staphylococcal strains in modified HHW medium for a period of 4-6 days;

b) homogenizing the bacterial cells in a physiological buffer;

c) centrifugating at 13,000 x g for 15 minutes and separating the surnatants;

d) desalting by dyalisis the surnatant using membranes with a cut-off of 12 kDa;

e) freezing and lyophilizing the solution obtained in (d);

f) suspending the lyophilized material in a deproteinizing solution;

g) centrifugating at 30,000xg the solution obtained in (f) and separating the surnatant with addition of ethanol;

h) centrifugating the surnatant of step (g) at 20,000xg to obtain the

polysaccharide;

i) washing the precipitated polysaccharide with absolute ethanol, dehydrating in vacuo and suspending it in sterile H_2O.

7. A method according to ~~claims 1-6~~ Claim 1, which is in form of ELISA, gel immuno-precipitation, immuno-diffusion, contro-immunoelectrophoresis, radioimmunologic assay, complement fixation.

8. A process for preparing a polysaccharide from *Staphylococcus* cultures which comprises:

a) culturing the staphylococcal strains in modified HHW medium for a period of 4-6 days;

b) homogenizing the bacterial cells in a physiological buffer;

c) centrifugating at 13,000 x g for 15 minutes and separating the surnatants;

d) desalting by dyalisis the surnatant using membranes with a cut-off of 12 kDa;

e) freezing and lyophilizing the solution obtained in (d);

f) suspending the lyophilized material in a deproteinizing solution;

g) centrifugating at 30,000xg the solution obtained in (f) and separating the surnatant with addition of ethanol;

h) centrifugating the surnatant of step (g) at 20,000xg to obtain the polysaccharide;

i) washing the precipitated polysaccharide with absolute ethanol, dehydrating in vacuo and suspending it in sterile H_2O.

9. A polysaccharide obtainable by the process of claim 6.

10. A kit for use in a method according to ~~claims 1-5~~ Claim 1, containing the polysaccharide, the antibodies and the detection reagents in suitable containers in combination with vehicles, excipients, additives, preservatives or stabilizers.

11. A kit according to claim 8, containing microtiter strips pre-sensitized with the antigen together with positive and negative control sera.

12. Use of a polysaccharide produced by virulent staphylococcal strains in an immunochemical assay for the determination of prosthetic infections.

13. Use according to claim 12, wherein the polysaccharide is that of claim 9.

14. Staphylococcal strain deposited at DSMZ under deposit No. 11942.

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